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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,462	11/21/2005	Reinhard Strey	04156.0016U1	2768
23859 7590 07/08/2008 NEEDLE & ROSENBERG, P.C. SUITE 1000 999 PEACHTREE STREET ATLANTA, GA 30309-3915				
EXAMINER				
CHANG, VICTOR S				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
07/08/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/540,462

**Applicant(s)**

STREY ET AL.

**Examiner**

Victor S. Chang

**Art Unit**

1794

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 25-58 is/are pending in the application.
- 4a) Of the above claim(s) 29-32 and 36-58 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-28 and 33-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date 11/13/07.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application.
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Introduction***

1. Applicants' amendments and remarks filed on 4/9/2008 have been entered. Claims 25, 26 and 37 have been amended.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. In response to the amendments, the grounds of rejection have been updated as set forth below. Rejections not maintained are withdrawn.

### ***Election/Restrictions***

4. Since claim 37 has been amended as a process claim, it now belongs to non-elected Group II [see response filed 6/28/2007] and is withdrawn accordingly. Applicants' previous response filed 9/24/2007 has elected "water" as the first fluid species (K1), "ethane" as the second fluid species (K2), and "octaethylene glycol monododecyl ether" as the amphiphilic material (K3). Claims 25-28 and 33-35 are active. Claims 29-32 and 36-58 are withdrawn.

### ***Rejections Based on Prior Art***

5. Claims 25, 26, 28, 33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Nielsen et al. [US 5419487].

Nielsen's invention relates to a water-borne coating composition (K1) and a compressed fluid dispersed therein (K2). The water-borne coating composition contains a water-soluble

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polymer (liquid state of matter) [col. 6, ll. 46]. The compressed fluid is a supercritical fluid compressed fluid, such as ethane [col. 1, ll. 7-13]. The liquid compressed fluid phase is finely dispersed into the liquid mixture. Forming and maintaining the finely dispersed liquid compressed fluid phase (pools) in the liquid mixture may be aided by using a surfactant (K3) [col. 17, ll. 22-44].

For claims 25 and 34, Nielsen teaches in the Background section that it is known that upon decompression to a subcritical state, the compressed fluid expands and becomes gas [col. 2, ll. 39-41]. Since the expanded gas is enclosed and interfaced with the water-borne coating composition via the surfactant, it is inherently a foamed material. Further, the examiner takes Official notice that a surfactant is inherently an amphiphilic material comprising components (blocks) facing aqueous liquid and non-aqueous liquid. Nielsen teaches all the features of the claimed invention.

For claim 26, Nielsen teaches that water is used to achieve low viscosity [col. 4, ll. 58-59].

For claim 28, since Nielsen teaches a water-borne coating composition (K1), its polarity is deemed to be inherently disclosed.

For claim 33, ethane is inherently a hydrocarbon.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 28 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nielsen et al. [US 5419487].

The teachings of Nielsen are again relied upon as set forth above.

For claim 28, Nielsen teaches in Example 1 a water-borne composition containing 45 w% water (K1). Nielsen is silent about the bubble density, bubble size, and total volume of the foam. However, since Nielsen's supercritical fluid containing liquid mixture reads on all the features of the claimed invention as set forth above, the resultant features of the foamed material are deemed to be either anticipated, or obviously provided by practicing the invention of prior art.

7. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen et al. [US 5419487] in view of Anderson et al. [US 20050163924].

The teachings of Nielsen are again relied upon as set forth above.

For claim 35, Nielsen is silent about the composition of surfactant as octaethylene glycol monododecyl ether. However, Anderson's invention relates to various well known functionally equivalent surfactants including octaethylene glycol monododecyl ether [claim 6]. It would have an obvious substitution to one of ordinary skill in the art to use a well known alternative surfactant such as octaethylene glycol monododecyl ether, because the selection of a known equivalent material based on its suitability for its intended use supported a *prima facie* obviousness determination. See MPEP § 2144.07.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S. Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 7:00 am - 5:00 pm, Tuesday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Victor S Chang/  
Primary Examiner, Art Unit 1794